



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR   | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|------------------------|---------------------|------------------|
| 10/510,787      | 10/12/2004  | Gerard Eduard Rosmalen | NL 020294           | 4313             |

24737 7590 04/19/2006

PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
P.O. BOX 3001  
BRIARCLIFF MANOR, NY 10510

EXAMINER

GIESY, ADAM

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2627

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/510,787

Applicant(s)

ROSMALLEN, GERARD EDUARD

Examiner

Adam R. Giesy

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "1" has been used to designate both the disc in Figure 1 and the line in Figure 2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities:

Examiner asserts that all instances of the word 'focussing' should be amended to read 'focusing'.

Appropriate correction is required.

3. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in

Art Unit: 2627

upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

### ***Claim Objections***

4. Claims 1-6 and 11 are objected to because of the following informalities:

Regarding claims 1-6, Examiner asserts that all instances of the word 'focussing' should be amended to read 'focusing'.

Regarding claim 1, Examiner asserts that the phrase "...which means constrain...", in line 4 of claim 1 should read "...wherein said means constrain...".

Regarding claim 11, Examiner asserts that the phrase "...read/write head..." should be amended to read "...read and/or write head..." in order to better correspond with the terminology used in claim 1.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Examiner is unclear as to the amount of translation being claimed by the phrase "...an at least limited translation..." found in lines 5-6 and 7-8 of claim 1. Examiner suggests amending that particular phrase to read "...limited translation...".

Examiner is unclear as to the amount of rotation being claimed by the phrase "...an at least limited rotation..." found in line 9 of claim 1. Examiner suggests amending that particular phrase to read "...limited rotation...".

For the purposes of the examination of claim 1, the Examiner will interpret "...an at least limited translation..." in lines 5-6 and 7-8 of claim 1, to mean "...limited translation...". Examiner will also interpret "...an at least limited rotation..." in line 9 of claim 1, to mean "...limited rotation...".

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-3, 5, 8, 10, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Wakabayashi et al. (hereinafter Wakabayashi – US Pat. No. 5,905,255).

Regarding claim 1, Wakabayashi discloses A read and/or write head for an optical disk drive, comprising a lens holder (Figure 1, element 2), a support frame (Figure 1, element 9), means for suspending the lens holder in the support frame, which means constrain movement of the lens holder relative to the support frame (Figure 1, elements 8a-8d), allowing only an at least limited translation in a focusing direction (z), parallel to the optical axis of a lens in the lens holder, an at least limited translation in a tracking direction (y), perpendicular to the focusing direction (z), and an at least limited rotation about an axis in a tangent direction (x), perpendicular to both the focusing and the tracking direction (see column 6, lines 27-30), and actuator means, comprising two conductive focusing coils with a winding axis parallel to the focusing direction (z) (see column 9, lines 13-14), each positioned relative to a magnetic circuit in such a way that a current flowing through a coil gives rise to a force between the lens holder and the support frame in the focusing direction (z), the winding axes of the two focusing coils being positioned on opposite sides of a plane through the center of mass of the lens holder and parallel to the focusing and tangent direction, characterized in that the

Art Unit: 2627

focusing coils are spaced apart in the tangent direction (x) (see column 5, lines 56-64 and column 9, lines 1-12).

Regarding claim 2, Wakabayashi discloses all of the limitations of claim 1 as discussed in the claim 1 rejection above and further that the distance (d) between each winding axis of a focusing coil and the plane through the center of mass of the lens holder, and parallel to the focusing and the tangent direction, is smaller than the distance from the winding axis to the winding of each focusing coil in a lateral direction parallel to the tangent direction (see Figure 1 - the space between the winding axis of elements 7a and 7d and the center of gravity of the holder [in the T direction] is less than the lateral distance [in the K direction] between the two coils since the coils are spaced apart in the tangential [K] direction).

Regarding claim 3, Wakabayashi discloses all of the limitations of claim 1 as discussed in the claim 1 rejection above and further that the focusing coils are arranged point-symmetrically relative to the center of mass of the lens holder (see column 8, lines 6-18).

Regarding claim 5, Wakabayashi discloses all of the limitations of claim 1 as discussed in the claim 1 rejection above and further that each magnetic circuit comprises a yoke extending at least partly through the corresponding focusing coil along its winding axis (see column 6, lines 14-18).

Regarding claim 8, Wakabayashi discloses all of the limitations of claim 1 as discussed in the claim 1 rejection above and further that the suspension means comprise four wire members (Figure 1, elements 8a-8d), each attached at one end to

the lens holder and at the other end to the support frame (elements 8a-8d are attached at one end to element 2 – the lens holder – and at the other end to element 9 – the support frame - as shown in Figure 1).

Regarding claim 10, Wakabayashi discloses all of the limitations of claim 8 as discussed in the claim 8 rejection above and further that the wire members are provided with a cladding of an elastic material (see column 5, lines 46-48).

Regarding claim 11, Wakabayashi discloses all of the limitations of claim 1 as discussed in the claim 1 rejection above and further that the read and/or write head is used in an optical drive (see column 1, lines 4-6).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wakabayashi et al. (hereinafter Wakabayashi – US Pat. No. 5,905,255) in view of Nishikawa (US Pat. No. 6,307,687 B1).

Regarding claim 4, Wakabayashi discloses all of the limitations of claim 1 as discussed in the claim 1 rejection above. Wakabayashi fails to disclose that the two focusing coils are mounted on the lens holder.

Nishikawa discloses an optical head wherein two focusing coils are mounted to the lens holder (see column 5, lines 6-8).



It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the optical head as disclosed by Wakabayashi wherein the permanently mounted magnets are fixed and focusing coils are mounted on the lens holder as disclosed by Nishikawa, the motivation being to allow for more finite control of the optical head focusing means via a stabilized magnet and mobile coils.

Regarding claim 9, Wakabayashi discloses all of the limitations of claim 4 as discussed in the claim 4 rejection above. Wakabayashi further discloses that the wire members are of an electrically conductive material (see column 9, lines 61-64). Wakabayashi fails to disclose that the wire members are electrically connected to the coils.

Nishikawa discloses that the wire support members are made of electrically conductive material and are electrically connected to the coils (see column 5, lines 31-33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the optical head configuration as discussed in the claim 4 rejection above with the electrically conductive support members as disclosed by Nishikawa, the motivation being to use a pre-existing part as a conveyor of the electrical supply for the coils in order to limit the number of parts and wires used to manufacture the optical head.

11. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wakabayashi et al. (hereinafter Wakabayashi – US Pat. No. 5,905,255) in view of Ohno (US Pat. No. 6,639,744 B2).

Regarding claim 6, Wakabayashi discloses all of the limitations of claim 5 as discussed in the claim 5 rejection above. Wakabayashi fails to disclose an air gap or the radial coil being mounted on the holder.

Ohno discloses an optical head wherein each magnetic circuit forms a loop in a plane parallel to the focusing and tangential direction (Figure 3, element 6) and comprises an air gap through which the windings of the corresponding focusing coil can move (Figure 4, element 11), at least one radial coil being mounted on the lens holder and located in each air gap with a winding axis aligned with the flux through the magnetic circuit (Figure 3, element 12 – the ‘tracking coil’ is the equivalent of the radial coil).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the optical head as disclosed by Wakabayashi wherein the radial (tracking) coils are mounted on the lens holder in air gaps as disclosed by Ohno, the motivation being to allow for more finite control of the optical head tracking means and to allow for a greater range of movement by incorporating air gaps.

Regarding claim 7, Wakabayashi discloses all of the limitations of claim 6 as discussed in the claim 6 rejection above. Wakabayashi fails to disclose an air gap or the radial coil being mounted on the holder.

Ohno discloses an optical head wherein two radial (tracking) coils are mounted side by side in the tracking (y) direction in the air gap (Figure 3, element 12 – note placement of tracking coils).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the optical head as disclosed by Wakabayashi wherein the radial (tracking) coils are mounted on the lens holder in air gaps as disclosed by Ohno, the motivation being to allow for more finite control of the optical head tracking means and to allow for a greater range of movement by incorporating air gaps.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Kimura et al. (US Doc. No. 2002/0071376) discloses an optical head with wired support members and focusing coils which are located about the center of gravity of the head.
- b. Kaaden et al. (US Pat. No. 6,621,618 B1) discloses an optical head which is supported by wire members which contain two radial coils mounted side by side on each end of the lens holder.
- c. Kume et al. (US Pat. No. 5,541,899) discloses an optical head with focusing coils located at each end of the lens holder.

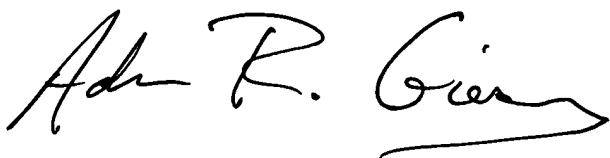
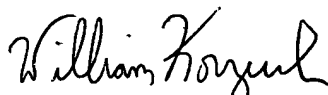
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam R. Giesy whose telephone number is (571) 272-7555. The examiner can normally be reached on 8:00am- 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2627

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ARG 4/13/2006

A handwritten signature in black ink, appearing to read "Adam R. Gien". The signature is fluid and cursive, with a long horizontal stroke at the end.

WILLIAM KORZUCH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

A handwritten signature in black ink, appearing to read "William Korzuch". Below the signature is a printed block of text identifying the person as William Korzuch, Supervisory Patent Examiner, Technology Center 2600.